

The Storm Water Pollution Prevention Bulletin is prepared by the Storm Water Compliance Review Task Force to aid all projects and operations in maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements.

Sandblasting Operations and Storm Water Pollution Control

Caltrans construction projects frequently involve sandblasting operations. Structural steel members, reinforcing bars, pavements, and concrete joints are typically sandblasted to remove oil, dirt, excess mortar, paint, and any other material that might affect the subsequent construction process. Preventing deposits from sandblasting shot and debris from entering storm drains or receiving waters is essential for reducing pollutant discharges during construction. Reducing or eliminating sandblasting pollutants can be achieved with careful planning and use of proper Best Management Practices (BMPs).

PLANNING

Review the **Special Provisions** for requirements regarding sandblasting or debris containment. These requirements are generally found in the Water Pollution Control section, the Existing Highway Facilities section or within the local agency permits, including the Air Quality Control Board. The Special Provisions may require a debris containment structure if the project involves removal of lead-based paint, or is located near or over a waterway or environmentally sensitive area (ESA).

The Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) should reference the appropriate section of the Special Provisions. If the Special Provisions do not include sandblasting requirements, assure that the issues are properly addressed in the project SWPPP/WPCP.

Become familiar with **Standard Specifications** that may address sandblasting issues: Sections 7-1.01F Air Pollution Control, 7-1.01G Water Pollution Control, 7-1.11 Preservation of Property, and Section 10 Dust Control.

An essential part of planning is **knowledge of the jobsite**. The following questions should be addressed:

- What direction are the prevailing winds?
- Does the sandblast debris contain hazardous materials?
- Will the sandblasting operation cause debris to be transported into a water-body, a storm drain system or ESA?
- Is traffic safety affected by the sandblasting operation?

Remember that sandblasting residue is easily transported by wind and can become a potential traffic safety issue by reducing driver visibility.

BEST MANAGEMENT PRACTICES

Containment structures are typically used when 100% containment of sandblasting debris is needed. The type of containment structure varies depending on the surface being sandblasted and the configuration of the work area. Wood-framed,

plastic-wrapped structures are commonly used. Ensure that the containment structure meets the required OSHA standards for worker safety, especially confined space requirements. (See the July 15, 1997 bulletin for other details on containment structures).



This is a plastic-enclosed containment system with a negative air attachment. It is being used to keep sandblast materials from falling into a large harbor.

Shrouded power tools equipped with a vacuum system offer a high degree of material containment when used properly. Depending on locations, surface type, and regulatory requirements, the use of shrouded tools may eliminate the need for a containment system. The production rates for shrouded tools may be reduced, but this should be balanced against the labor-intensive set-up and removal of a containment structure.

Sandblasting debris may not have to be 100% contained. The use of plastic sheeting, tarps, and other barriers are also effective methods to keep sandblast debris from entering the traffic lanes and from being deposited onto adjacent private property.

In this case the debris can usually be controlled with more common erosion and sediment control measures. Best Management Practices that may be considered include: CD26A - soil stabilization, dust control, and CD40 - storm drain inlet protection. For additional information, consult the Caltrans Storm Water Quality Handbooks.

And finally, **good housekeeping**, including street sweeping, site cleanup and trash disposal is essential for all operations.

Additional information is available in the Caltrans Storm Water Quality Handbooks. Questions or comments may be directed to:

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